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P R E F A C E

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The Zoology department of Willingdon College, Sangli (Maharashtra) is engaged in the investigations on the effects of various plant preparations on the male reproductive system of albino rats.

The department is also conducting studies on insect pests of cotton, castor and taxonomy and biology of parasitic hymenopteran insects as living weapons for biological control.

The present dissertation is concerned with " Effect of Plumbagin on the male reproductive system of rat."

The present dissertation is divided into five chapters, the first chapter being on introduction giving the review of the literature on agents having antifertility activity, reasons that stimulated the present investigation, plan of proposed work and details of biological and chemical properties of Plumbagin. The second is devoted to the detailed description of the material and methods employed in the present investigation. The third chapter deals with alterations in morphology and histology of testes, epididymes, vas deferenses, seminal vesicles, prostate glands and Cowper's glands of albino rats caused by Plumbagin. The fourth chapter deals with alterations in the acid phosphatase and alkaline phosphatase activities due to the administration of Plumbagin.

Each of these chapters contains a brief review of the earlier work, detailed report of observations and a discussion in which the

observations have been duly compared to the available literature on the effects of various antifertility agents and certain conclusions have been drawn. In each of these chapters the text of the observations is well supported by the tabular data, graphical illustrations and photomicrographs of histology. In the fifth chapter some concluding remarks with the ideas for future work are given briefly. This dissertation ends with a bibliography of literature cited in this dissertation.